

- 92a Electrical connection of the high-power component
- 92b Attachment element (screw)
- 92c Contact spring
- 93 Opening
- 93a Support element
- 94 Insulating frame for holding the contact springs 92c
- 95 Sealing element
- 95a Compound
- 96 Plug housing
- 99 Attachment element (threaded bolt)
- 100 Attachment bracket
- 100a Bores
- 101 Attachment bracket
- 103 Attachment elements formed in the cover
- 104 Fifth recesses in the carrier platform
- 105 Contact element
- 106 Insulating dividing wall
- 107 Plug pin contact
- 107a Attachment element
- 108 Plug pin contact
- 108a Attachment element
- 109 Attachment area of the carrier platform, which lies opposite the bores 22 in the attachment tabs 21
- 110 Fourth recess in the carrier platform for receiving high-power components
- 111 Latching element
- C Capacitor

### Claims

1. Housing for electrical high-power components,  
 with a carrier platform (1) made from a fiber-composite material containing a reinforcing glass fiber component, and at least one cover (2) connected rigidly to the carrier platform,  
 wherein the reinforcing glass fiber component in the fiber-composite material is selected so that its thermal coefficient of longitudinal expansion deviates, in terms of magnitude, by a maximum of 30% from that of the cover of the material.

2. Housing according to Claim 1, in which the thermal coefficient of longitudinal expansion of the fiber-composite material deviates, in terms of magnitude, by a maximum of 20% from that of the material of the cover.

3. Housing according to Claim 1, in which the thermal coefficient of longitudinal expansion of the fiber-composite material deviates, in terms of magnitude, by a maximum of 10% from that of the material of the cover.

4. Housing according to Claim 1-3, in which the weight percent of reinforcing glass fibers lies between 50 and 90%.

5. Housing according to Claim 4, in which the reinforcing glass fiber component lies between 60 and 75%.

6. Housing according to Claim 1-5, wherein the cover (2) is composed of metal.

7. Housing according to Claim 1-6, wherein the cover (2) seals with the carrier platform in at least one area.

8. Housing according to one of Claims 1-7, in which the cover (2) extends into a first recess (18).

9. Housing according to Claim 1-8, in which attachment tabs (21), which each feature at least one bore (22), are formed on the side of the carrier platform (1); in which the carrier platform (1) has openings; in which the attachment elements (99) are provided, which connect the openings of the carrier platform (1) to the corresponding bores (22) of the attachment tabs (21).

10. Housing according to Claim 1-9, in which at least one fourth recess (110) for holding high-power components is provided in the carrier platform (1).

11. Housing according to one of Claims 1-10, in which inserts (18c) in the form of sockets for holding attachment elements are installed in at least one side wall of the carrier platform (1), wherein the axes of the sockets run parallel to the base of the carrier platform (1), wherein the side wall of the carrier platform (1) runs perpendicular to its base in the area of the sockets.

12. Housing according to Claim 1-11, in which openings (93) for holding electrical feedthrough sockets between the inside and outside of the housing are formed in the carrier platform (1).

13. Housing according to one of Claims 1-12, in which a fourth recess (110) for holding high-power components is provided in the carrier platform (1) in the center area.

14. Housing according to one of Claims 1-13, in which at least one opening for attaching high-power components is provided in at least one cover wall.

15. Housing according to Claim 1-14, in which at least one impregnating opening (8) is provided in a side wall or end wall of the cover (2).

16. Housing for high-power components, which has two parallel mounting planes, containing two plastic platforms (1', 1d), which correspond to the mounting planes and which are made from a fiber-composite material and a jacket (2d) arranged between the plastic platforms and connected rigidly to these platforms,

wherein openings (93) for holding electrical feedthrough sockets are formed in each plastic platform (1', 1d),

wherein the reinforcing glass fiber component in each plastic platform (1', 1d) is set so that the coefficient of longitudinal expansion of the plastic platform deviates, in terms of magnitude, by  $\beta < 30\%$  of that of the cover (2).

17. Module with a housing according to one of Claims 1-16, in which capacitors (C) are mounted in the housing.

18. Module according to Claim 17, in which three-phase chokes are mounted in the housing.

19. Module according to Claim 17 or 18, in which the openings (93) are designed for holding electrical feedthrough sockets for ribbon cables.

20. Module according to one of Claims 17-19, in which external contacts (92) are provided in the form of plug clips, attachment tabs, a plug pin, or threaded bolt.

21. Module according to one of Claims 17-20, in which the electrical connection (92a) of each capacitor forms a contact with several external contacts (92) of the module.

### Abstract

#### Housing for high-power components

The invention relates to a housing for high-power components, especially high-power capacitors. The invention is based on the idea of providing a housing, which has a carrier platform made from a suitable electrically insulating material and a preferably metallic cover, wherein the thermal expansion coefficients of the platform and of the cover are matched to each other. This matching is achieved according to the invention by adjusting the glass-fiber coefficient of a fiber-composite material.